Patent claims

1. Method for producing a data carrier in which at least two substrates are adhered to one another by

applying to a first substrate (6) an adhesive film (25) that is adhesive on two sides; aligning a second substrate (6) with respect to said first substrate (6); and

joining said substrates (6, 10) to one another, characterized in that said adhesive film (25) is pressed onto said substrate (6) using a rotating pressure roller (33) while said substrate (6) and said pressure roller (33) are moved relative to one another.

2. Method in accordance with claim 1, characterized in that said adhesive film (25) is withdrawn from a carrier film (26) during or after application to said first substrate (6).

3. Method in accordance with claim 1 or 2, characterized in that a protective film (24) is withdrawn from said adhesive film (25) prior to its application to said first substrate (6).

4. Method in accordance with any of the preceding claims, characterized in that the shape and size of said adhesive film (25) corresponds to the surfaces of said substrates (6, 10) to be adhered.

5. Method in accordance with any of the preceding claims, characterized in that sections (27) of said adhesive film (25) that correspond to the shape and size of said substrates (6, 10) are punched onto said carrier film (26).

6. Method in accordance with any of the preceding claims, characterized in that said adhesive film (25) is applied centered on the surface of said substrate (6) to be adhered.

7. Method in accordance with any of the preceding claims, characterized in that said adhesive film (25) and said substrate (6) are aligned with one another prior to application.

8. Method in accordance with any of the preceding claims, characterized in that the pressure of said pressure roller (33) is controlled.

9. Method in accordance with any of the preceding claims, characterized in that prior to pressing by said pressure roller (33) said adhesive film (25) is held at a pre-specified angle relative to the surface of said substrate (6).

10. Method in accordance with any of the preceding claims, characterized in that said substrate (6) is moved past said pressure roller (33) linearly.

11. Method in accordance with claim 12, characterized in that said pressure roller (33) is rotated synchronously to the movement of said substrate (6).

12. Method in accordance with any of the preceding claims, characterized in that said substrates (6, 10) are placed on a centering and holding device (60) for aligning them.

13. Method in accordance with claim 14, characterized in that said centering and holding device (60) holds said substrates (6, 10) spaced from one another prior to the joining.

14. Method in accordance with any of the preceding claims, characterized in that said substrates (6, 10) are joined in a vacuum.

15. Method in accordance with any of the preceding claims, characterized in that said substrates (6, 10) are pressed together.

16. Method in accordance with claim 17, characterized in that the pressure exerted on said substrates (6, 10) is controlled.

17. Method in accordance with any of the preceding claims, characterized in that said adhesive film (25) is an adhesive film (25) that responds to pressure.

18. Method in accordance with any of the preceding claims, characterized in that said adhesive film (25) is hardened.

19. Method in accordance with any of the preceding claims, characterized in that said adhesive film is made of one layer of adhesive material.

20. Apparatus for producing a data carrier with at least two substrates (6, 10) adhered to one another, with

a laminating station (7) for applying to a first substrate an adhesive film (25) that is adhesive on two sides; and a substrate adhering station (11) for aligning and joining said substrates (6,

10), characterized in that said laminating station (7) has a rotatable pressure roller (33) and a device (47) for moving said substrate (6) and/or said pressure roller relative to one another.

21. Apparatus in accordance with claim 20, characterized in that the shape and size of said adhesive film (25) correspond to the surfaces of said substrates (6, 10) to be adhered.

22. Apparatus in accordance with either of claims 20 or 21, characterized in that sections (27) of said adhesive film (25) that correspond to the shape and size of said surfaces of the substrates (6, 10) to be adhered are punched onto a carrier film (26).

23. Apparatus in accordance with any of claims 20 to 22, characterized in that said laminating station (7) has an aligning unit for aligning said adhesive film (25) with the surface of said substrate (6) to be adhered.

24. Apparatus in accordance with claim 23, characterized in that said device has at least one linear movement unit (47) for said substrate (6).

25. Apparatus in accordance with any of claims 20 through 24, characterized by a centering and holding device (60) that in a first position holds said substrates (6, 10) spaced from one another and in a second position enables centered joining of said substrates (6, 10).

26. Apparatus in accordance with any of claims 20 through 25, characterized in that said substrate adhering station (11) has a vacuum chamber (66).

27. Apparatus in accordance with claim 26, characterized in that said vacuum chamber (66) has a hood (65) and a base (59) that is formed by a substrate support element (58).

28. Apparatus in accordance with any of claims 20 through 27, characterized in that said substrate adhering station (11) has a pressure ram (67).

29. Apparatus in accordance with claim 28, characterized in that said pressure ram (67) has an element for actuating said centering and holding device (60) between said first and second positions.

30. Apparatus in accordance with any of claims 20 through 29, characterized in that said substrate adhering station (11) has an apparatus for applying compressed air on at least one of said substrates in order to press them together.

31. Apparatus in accordance with any of claims 20 through 30, characterized in that said adhesive film is a layer of adhesive material.

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